



*Independent Statistics & Analysis*  
U.S. Energy Information  
Administration

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# 2013 Domestic Uranium Production Report

May 2014



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## Contacts

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## Preface

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The U.S. Energy Information Administration (EIA) reports detailed data spanning 2003 through 2013 and summary data back to 1993 on U.S. uranium production activities in this report, *2013 Domestic Uranium Production Report*. The *Annual Energy Review* provides historical data back to 1949.

Data in this report are based primarily on information reported on Form EIA-851A, “Domestic Uranium Production Report (Annual)” and some information reported on Form EIA-858, “Uranium Marketing Annual Survey.” Form EIA-851A survey collects data on uranium milling and in-situ-leach processing, feed sources, mining, employment, drilling, expenditures, and reserve estimates. Form EIA-858 survey includes data collected on contracts and deliveries.

Prior editions of this report may be found:

<http://www.eia.gov/nuclear/reports.cfm>

The *Annual Energy Review* may be found:

<http://www.eia.gov/totalenergy/data/annual/>

Definitions for terms used in this report can be found in EIA’s Energy Glossary:

<http://www.eia.doe.gov/glossary/>.

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## Drilling

U.S. uranium exploration drilling was 1,231 holes covering 0.9 million feet in 2013, a 76% decrease in the number of holes compared with 2012. Development drilling was 4,013 holes and 2.9 million feet. Combined, total uranium drilling was 5,244 holes covering 3.8 million feet, 53% fewer holes than in 2012. Expenditures for uranium drilling in the United States were \$50 million in 2013, a decrease of 25% compared with 2012.

## Mining, production, shipments, and sales

U.S. uranium mines produced 4.6 million pounds  $U_3O_8$  in 2013, 6% more than in 2012. Three underground mines produced uranium ore during 2013, three less than during 2012. Uranium ore from underground mines is stockpiled and shipped to a mill, to be milled into uranium concentrate (a yellow or brown powder). Additionally, seven in-situ-leach (ISL) mining operations produced solutions containing uranium in 2013, two more than in 2012, that was processed into uranium concentrate at ISL plants. Overall, there were 10 mines that operated during part or all of 2013.

Total production of U.S. uranium concentrate in 2013 was 4.7 million pounds  $U_3O_8$ , 12% more than in 2012, from seven facilities: one mill in Utah (White Mesa Mill) and six ISL plants (Alta Mesa Project, Crow Butte Operation, Hobson ISR Plant/La Palangana, Lost Creek Project, Smith Ranch-Highland Operation, and Willow Creek Project). The Lost Creek Project started producing in 2013. Nebraska, Texas and Wyoming produced uranium concentrate at the six ISL plants in 2013.

Total shipments of uranium concentrate from U.S. mill and ISL plants were 4.7 million pounds  $U_3O_8$  in 2013, 19% more than in 2012. U.S. producers sold 4.4 million pounds  $U_3O_8$  of uranium concentrate in 2013 at a weighted-average price of \$44.65 per pound  $U_3O_8$ .

## Facility status (mills, heap leach plants, and in-situ-leach plants)

At the end of 2013, the White Mesa Mill in Utah was operating with a capacity of 2,000 short tons of ore per day. Shootaring Canyon Uranium Mill in Utah and Sweetwater Uranium Project in Wyoming were on standby with a total capacity of 3,750 short tons of ore per day. There are two mills planned for Colorado (Piñon Ridge Mill) and New Mexico (Pena Ranch) and two heap leach plants planned for Wyoming (Gas Hills and Sheep Mountain).

At the end of 2013, six U.S. uranium ISL plants were operating with a combined capacity of 13.3 million pounds  $U_3O_8$  per year (Crow Butte Operation in Nebraska; Alta Mesa Project and Hobson ISR Plant/La Palangana in Texas; Lost Creek Project, Smith Ranch-Highland Operation, and Willow Creek Project in Wyoming). The Nichols Ranch ISR Project was under construction in Wyoming. There are eight ISL plants planned in New Mexico, South Dakota, Texas, and Wyoming.

## Employment

Total employment in the U.S. uranium production industry was 1,156 person-years in 2013, a decrease of 3% from the 2012 total. Exploration employment was 149 person-years, a 7% decrease compared with 2012. Mining employment was 392 person-years, and decreased 15% from 2012. Milling and processing employment was 416 person-years, a 6% increase from 2012. Reclamation employment increased 11% to 199 person-years from 2012 to 2013. Uranium production industry employment for 2013 was in 12 States: Arizona, California, Colorado, Nebraska, New Mexico, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.

## Expenditures

Total expenditures for land, exploration, drilling, production, and reclamation were \$309 million in 2013, 13% less than in 2012. Expenditures for U.S. uranium production, including facility expenses, were the largest category of expenditures at \$168 million in 2013 and were down by 10% from the 2012 level. Uranium exploration expenditures were \$22 million and decreased 35% from 2012 to 2013. Expenditures for land were \$15 million in 2013, a 13% decrease compared with 2012. Reclamation expenditures were \$54 million, a 10% increase compared with 2012.

## Reserve estimates

The U.S. Energy Information Administration (EIA) in 2010 began collecting annual reserve estimates on the survey Form EIA-851A, "Domestic Uranium Production Report." To date, these annual reserve estimates span data years 2009 through 2013. This report presents data beginning from 2012 forward. There are no plans to publish data prior to 2012 due to reporting inconsistencies and data accuracy concerns.

These uranium reserves are estimated quantities of uranium in known mineral deposits of such size, grade, and configuration that the uranium could be recovered at or below a specified production cost (forward cost) with currently proven mining and processing technology and under current law and regulations. This information is collected from the entities that otherwise report on the Form EIA-851A; i.e. companies that conduct uranium drilling, exploration, mining, and reclamation.

For end of 2013, Table 10 includes uranium reserve estimates for 74 mines and properties by status, mining method, and State. Estimated uranium reserves were 47 million pounds  $U_3O_8$  at a maximum forward cost of up to \$30 per pound. At up to \$100 per pound, estimated reserves were 338 million pounds  $U_3O_8$ . At the end of 2013, estimated uranium reserves for mines in production were 20 million pounds  $U_3O_8$  at a maximum forward cost of up to \$50 per pound. Estimated reserves for properties in development drilling and under development for production were 32 million pounds  $U_3O_8$  at a maximum forward cost of up to \$50 per pound.

The uranium reserve estimates presented here cannot be compared with the much larger historical data set of uranium reserves published in the July 2010 report [U.S. Uranium Reserves Estimates](#). Those reserve estimates were made by EIA based on data collected by EIA and data developed by the National Uranium Resource Evaluation (NURE) program, operated out of Grand Junction, Colorado, by DOE and predecessor organizations. The EIA data covered approximately 200 uranium properties with reserve estimates, collected from 1984 through 2002. The NURE data covered approximately 800 uranium properties with reserve estimates, developed from 1974 through 1983. Although the 2013 data collected by the Form EIA-851A

survey covers a much smaller set of properties than the earlier EIA data and NURE data, EIA believes that within its scope the EIA-851A data provides more reliable estimates of the uranium recoverable at the specified forward cost than estimates derived from 1974 through 2002. In particular, this is because the NURE data has not been comprehensively updated in many years and is no longer a current data source.

**Table 1. U.S. uranium drilling activities, 2003-13**

| Year | Exploration Drilling |                 | Development Drilling |                 | Exploration and Development Drilling |                 |
|------|----------------------|-----------------|----------------------|-----------------|--------------------------------------|-----------------|
|      | Number of Holes      | Feet (thousand) | Number of Holes      | Feet (thousand) | Number of Holes                      | Feet (thousand) |
| 2003 | NA                   | NA              | NA                   | NA              | W                                    | W               |
| 2004 | W                    | W               | W                    | W               | 2,185                                | 1,249           |
| 2005 | W                    | W               | W                    | W               | 3,143                                | 1,668           |
| 2006 | 1,473                | 821             | 3,430                | 1,892           | 4,903                                | 2,713           |
| 2007 | 4,351                | 2,200           | 4,996                | 2,946           | 9,347                                | 5,146           |
| 2008 | 5,198                | 2,543           | 4,157                | 2,551           | 9,355                                | 5,093           |
| 2009 | 1,790                | 1,051           | 3,889                | 2,691           | 5,679                                | 3,742           |
| 2010 | 2,439                | 1,460           | 4,770                | 3,444           | 7,209                                | 4,904           |
| 2011 | 5,441                | 3,322           | 5,156                | 3,003           | 10,597                               | 6,325           |
| 2012 | 5,112                | 3,447           | 5,970                | 3,709           | 11,082                               | 7,156           |
| 2013 | 1,231                | 919             | 4,013                | 2,926           | 5,244                                | 3,845           |

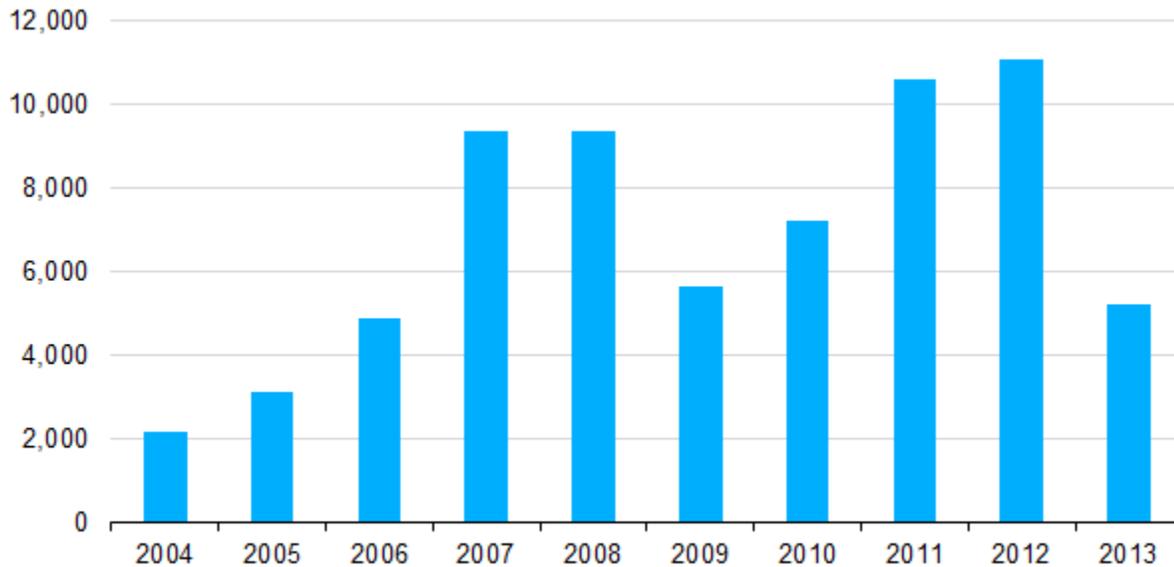
NA = Not available. W = Data withheld to avoid disclosure of individual company data.

Note: Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration: Form EIA-851A, "Domestic Uranium Production Report" (2003-2013).

**Figure 1. U.S. uranium drilling by number of holes, 2004-13**

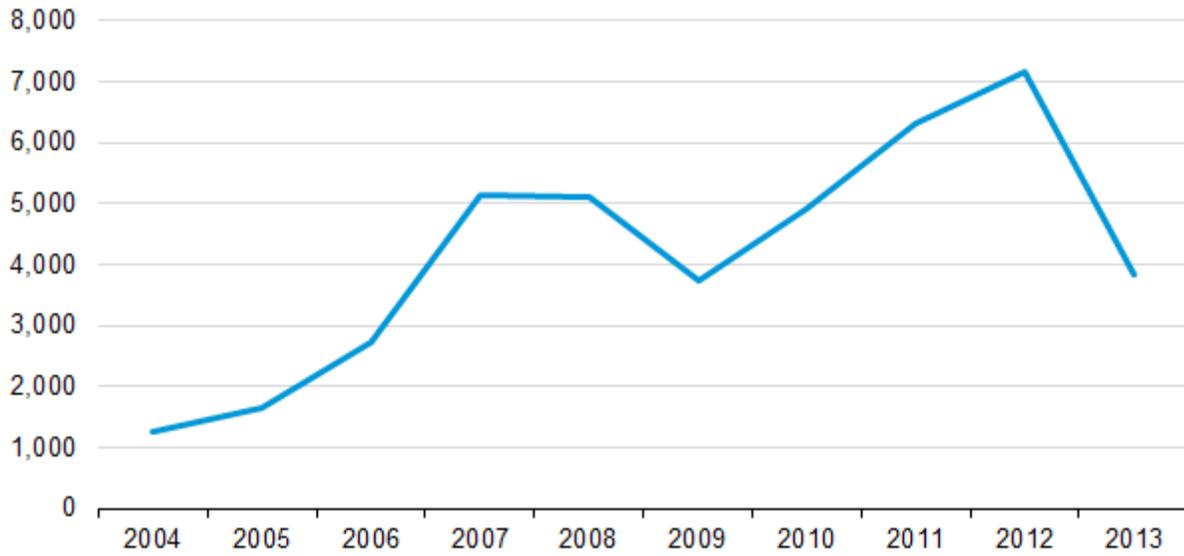
number of holes



Source: U.S. Energy Information Administration: Form EIA-851A, "Domestic Uranium Production Report" (2004-2013).

**Figure 2. U.S. uranium drilling in footage, 2004-13**

thousand feet



Source: U.S. Energy Information Administration: Form EIA-851A, "Domestic Uranium Production Report" (2004-2013).

**Table 2. U.S. uranium mine production and number of mines and sources, 2003-13**

| <b>Production / Mining Method</b>  | <b>2003</b>   | <b>2004</b>  | <b>2005</b>  | <b>2006</b>  | <b>2007</b>  | <b>2008</b>  | <b>2009</b>  | <b>2010</b>  | <b>2011</b>  | <b>2012</b>  | <b>2013</b>  |
|--|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Underground<br>(estimated contained<br>thousand pounds U <sub>3</sub> O <sub>8</sub> ) | W             | W            | W            | W            | W            | W            | W            | W            | W            | W            | W            |
| Open Pit<br>(estimated contained<br>thousand pounds U <sub>3</sub> O <sub>8</sub> )    | 0             | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| In-Situ Leaching<br>(thousand pounds U <sub>3</sub> O <sub>8</sub> )                   | W             | W            | 2,681        | 4,259        | W            | W            | W            | W            | W            | W            | W            |
| Other <sup>1</sup><br>(thousand pounds U <sub>3</sub> O <sub>8</sub> )                 | W             | W            | W            | W            | W            | W            | W            | W            | W            | W            | W            |
| <b>Total Mine Production</b><br><b>(thousand pounds U<sub>3</sub>O<sub>8</sub>)</b>    | <b>E2,200</b> | <b>2,452</b> | <b>3,045</b> | <b>4,692</b> | <b>4,541</b> | <b>3,879</b> | <b>4,145</b> | <b>4,237</b> | <b>4,114</b> | <b>4,335</b> | <b>4,577</b> |
| <b>Number of Operating Mines</b>   |               |              |              |              |              |              |              |              |              |              |              |
| Underground  | 1             | 2            | 4            | 5            | 6            | 10           | 14           | 4            | 5            | 6            | 3            |
| Open Pit   | 0             | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            |
| In-Situ Leaching   | 2             | 3            | 4            | 5            | 5            | 6            | 4            | 4            | 5            | 5            | 7            |
| Other Sources <sup>1</sup>   | 1             | 1            | 2            | 1            | 1            | 1            | 2            | 1            | 1            | 1            | 2            |
| <b>Total Mines and Sources</b>   | <b>4</b>      | <b>6</b>     | <b>10</b>    | <b>11</b>    | <b>12</b>    | <b>17</b>    | <b>20</b>    | <b>9</b>     | <b>11</b>    | <b>12</b>    | <b>12</b>    |

E = Estimated data. W = Data withheld to avoid disclosure of individual company data.

<sup>1</sup> Other includes, in various years, mine water, mill site cleanup and mill tailings, and well field restoration as sources of uranium.

Notes: Totals may not equal sum of components because of independent rounding. Table does not include byproduct production and sources. The 2003 annual production amount was estimated by rounding to the nearest 200,000 pounds to avoid disclosure of individual company data.

Source: U.S. Energy Information Administration: Form EIA-851A, "Domestic Uranium Production Report" (2003-2013).

**Table 3. U.S. uranium concentrate production, shipments, and sales, 2003-13**

| Activity at U.S. Mills and In-Situ-Leach Plants                                   | 2003     | 2004     | 2005     | 2006     | 2007     | 2008     | 2009     | 2010     | 2011     | 2012     | 2013     |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>Estimated contained U<sub>3</sub>O<sub>8</sub> (thousand pounds)</b>           |          |          |          |          |          |          |          |          |          |          |          |
| Ore from Underground Mines and Stockpiles Fed to Mills <sup>1</sup>               | 0        | W        | W        | W        | 0        | W        | W        | W        | W        | W        | W        |
| Other Feed Materials <sup>2</sup>   | W        | W        | W        | W        | W        | W        | W        | W        | W        | W        | W        |
| <b>Total Mill Feed</b>  | <b>W</b> |
| <b>Uranium Concentrate Produced at U.S. Mills</b>                                 |          |          |          |          |          |          |          |          |          |          |          |
| (thousand pounds U <sub>3</sub> O <sub>8</sub> )                                  | W        | W        | W        | W        | W        | W        | W        | W        | W        | W        | W        |
| <b>Uranium Concentrate Produced at U.S. In-Situ-Leach Plants</b>                  |          |          |          |          |          |          |          |          |          |          |          |
| (thousand pounds U <sub>3</sub> O <sub>8</sub> )                                  | W        | W        | W        | W        | W        | W        | W        | W        | W        | W        | W        |
| <b>Total Uranium Concentrate Production</b>                                       |          |          |          |          |          |          |          |          |          |          |          |
| (thousand pounds U <sub>3</sub> O <sub>8</sub> )                                  | E2,000   | 2,282    | 2,689    | 4,106    | 4,534    | 3,902    | 3,708    | 4,228    | 3,991    | 4,146    | 4,659    |
| <b>Total Uranium Concentrate Shipped from U.S. Mills and In-Situ-Leach Plants</b> |          |          |          |          |          |          |          |          |          |          |          |
| (thousand pounds U <sub>3</sub> O <sub>8</sub> )                                  | E1,600   | 2,280    | 2,702    | 3,838    | 4,050    | 4,130    | 3,620    | 5,137    | 4,000    | 3,911    | 4,655    |
| <b>Total Uranium Concentrate Sales by U.S. Producers<sup>3</sup></b>              |          |          |          |          |          |          |          |          |          |          |          |
| Deliveries (thousand pounds U <sub>3</sub> O <sub>8</sub> )                       | W        | W        | W        | 3,786    | 3,602    | 3,656    | 2,044    | 2,684    | 2,870    | 3,630    | 4,447    |
| Weighted-Average Price (dollars per pound U <sub>3</sub> O <sub>8</sub> )         | W        | W        | W        | 28.98    | 42.11    | 43.81    | 36.61    | 37.59    | 52.36    | 49.63    | 44.65    |

E = Estimated data. W = Data withheld to avoid disclosure of individual company data.

<sup>1</sup> Uranium ore "Fed to Mills" in any year can include: ore mined and shipped to a mill during the same year, ore that was mined during a prior year and later shipped from mine-site stockpiles, and/or ore obtained from drawdowns of stockpiles maintained at a mill site.

<sup>2</sup> Includes for various years uranium from mill cleanup, mine water, tailings water, and other materials.

<sup>3</sup> Sales of U.S.-origin uranium only.

Notes: The 2003 annual amounts were estimated by rounding to the nearest 200,000 pounds to avoid disclosure of individual company data. Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration: Form EIA-851A, "Domestic Uranium Production Report" (2003-2013) and Form EIA-858, "Uranium Marketing Annual Survey" (2003-2013).

**Table 4. U.S. uranium mills and heap leach facilities by owner, location, capacity, and operating status at end of the year, 2009-13**

| Owner   | Mill and Heap Leach <sup>1</sup><br>Facility Name | County, State (existing<br>and planned locations) | Capacity<br>(short tons of<br>ore per day) | Operating Status at End of the Year |            |                           |  |  |
|---|---|---|--|-------------------------------------|------------|---------------------------|--|--|
|   |   |   |  | 2009                                | 2010       | 2011                      | 2012                                   | 2013                                       |
| Cotter Corporation  | Canon City Mill                                   | Fremont, Colorado                                 | 0  | Standby                             | Standby    | Reclamation               | Demolished                             | Demolished                                 |
| EFR White Mesa LLC  | White Mesa Mill                                   | San Juan, Utah                                    | 2,000                                      | Operating                           | Operating  | Operating                 | Operating                              | Operating-<br>Processing<br>Alternate Feed |
| Energy Fuels Resources<br>Corporation                         | Piñon Ridge Mill                                  | Montrose, Colorado                                | 500  | Developing                          | Developing | Permitted And<br>Licensed | Partially<br>Permitted And<br>Licensed | Permitted And<br>Licensed                  |
| Energy Fuels Wyoming Inc.                                     | Sheep Mountain                                    | Fremont, Wyoming                                  | 725  | -                                   | -          | -                         | -                                      | Undeveloped                                |
| Kennecott Uranium<br>Company/Wyoming Coal<br>Resource Company | Sweetwater Uranium<br>Project                     | Sweetwater, Wyoming                               | 3,000                                      | Standby                             | Standby    | Standby                   | Standby                                | Standby                                    |
| Roca Honda Resources LLC                                      | Pena Ranch  | McKinley, New Mexico                              | 2,000                                      | -                                   | -          | -                         | -                                      | Undeveloped                                |
| Strathmore Resources (US)<br>Ltd                              | Gas Hills   | Fremont, Wyoming                                  | 2,200                                      | -                                   | -          | -                         | -                                      | Undeveloped                                |
| Uranium One Americas, Inc.                                    | Shootaring Canyon<br>Uranium Mill                 | Garfield, Utah                                    | 750  | Standby                             | Standby    | Standby                   | Standby                                | Standby                                    |
| <b>Total Capacity:</b>  |   |   | <b>11,175</b>                              |                                     |            |                           |  |  |

- = No data reported.

<sup>1</sup> Heap leach solutions: The separation, or dissolving-out from mined rock, of the soluble uranium constituents by the natural action of percolating a prepared chemical solution through mounded (heaped) rock material. The mounded material usually contains low grade mineralized material and/or waste rock produced from open pit or underground mines. The solutions are collected after percolation is completed and processed to recover the valued components.

Notes: Capacity for 2013. An operating status of "Operating" indicates the mill was producing uranium concentrate at the end of the period.

Source: U.S. Energy Information Administration: Form EIA-851A, "Domestic Uranium Production Report" (2009-2013).

**Table 5. U.S. uranium in-situ-leach plants by owner, location, capacity, and operating status at end of the year, 2009-13**

| In-Situ-Leach Plant Owner                  | In-Situ-Leach Plant Name                              | County, State (existing and planned locations) | Production Capacity (pounds U <sub>3</sub> O <sub>8</sub> per year) | Operating Status at End of the Year |                                  |                                  |                                  |                                  |
|--|---|--|---|-------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|  |   |  |   | 2009                                | 2010                             | 2011                             | 2012                             | 2013                             |
| AUC LLC                                    | Reno Creek  | Campbell, Wyoming                              | 2,000,000   | -                                   | -                                | -                                | -                                | Developing                       |
| Cameco                                     | Crow Butte Operation                                  | Dawes, Nebraska                                | 1,000,000   | Operating                           | Operating                        | Operating                        | Operating                        | Operating                        |
| Hydro Resources, Inc.                      | Church Rock   | McKinley, New Mexico                           | 1,000,000   | Partially Permitted And Licensed    | Partially Permitted And Licensed | Partially Permitted And Licensed | Partially Permitted And Licensed | Partially Permitted And Licensed |
| Hydro Resources, Inc.                      | Crownpoint  | McKinley, New Mexico                           | 1,000,000   | Partially Permitted And Licensed    | Partially Permitted And Licensed | Partially Permitted And Licensed | Partially Permitted And Licensed | Partially Permitted And Licensed |
| Lost Creek ISR, LLC                        | Lost Creek Project                                    | Sweetwater, Wyoming                            | 2,000,000   | Developing                          | Developing                       | Partially Permitted And Licensed | Under Construction               | Operating                        |
| Mestena Uranium LLC                        | Alta Mesa Project                                     | Brooks, Texas                                  | 1,500,000   | Producing                           | Producing                        | Producing                        | Producing                        | Producing                        |
| Power Resources, Inc. dba Cameco Resources | Smith Ranch-Highland Operation                        | Converse, Wyoming                              | 5,500,000   | Operating                           | Operating                        | Operating                        | Operating                        | Operating                        |
| Powertech Uranium Corp                     | Dewey Burdock Project                                 | Fall River and Custer, South Dakota            | 1,000,000   | Undeveloped                         | Undeveloped                      | Undeveloped                      | Developing                       | Developing                       |
| South Texas Mining Venture                 | Hobson ISR Plant                                      | Karnes, Texas                                  | 1,000,000   | Permitted And Licensed              | Operational                      | Operating                        | Operating                        | Operating                        |
| South Texas Mining Venture                 | La Palangana  | Duval, Texas                                   | 1,000,000   | Permitted And Licensed              | Operating                        | Operating                        | Operating                        | Operating                        |
| Strata Energy Inc.                         | Ross  | Crook, Wyoming                                 | 3,000,000   | -                                   | -                                | Developing                       | Partially Permitted And Licensed | Partially Permitted And Licensed |
| URI, Inc.                                  | Kingsville Dome                                       | Kleberg, Texas                                 | 1,000,000   | Standby                             | Standby                          | Standby                          | Standby                          | Restoration                      |
| URI, Inc.                                  | Rosita  | Duval, Texas                                   | 1,000,000   | Standby                             | Standby                          | Standby                          | Standby                          | Restoration                      |
| URI, Inc.                                  | Vasquez   | Duval, Texas                                   | 800,000   | Restoration                         | Restoration                      | Restoration                      | Restoration                      | Restoration                      |
| Uranerz Energy Corporation                 | Nichols Ranch ISR Project                             | Johnson and Campbell, Wyoming                  | 2,000,000   | Developing                          | Partially Permitted And Licensed | Under Construction               | Under Construction               | Under Construction               |
| Uranium Energy Corp.                       | Goliad ISR Uranium Project                            | Goliad, Texas                                  | 1,000,000   | Partially Permitted And Licensed    | Partially Permitted And Licensed | Partially Permitted And Licensed | Permitted And Licensed           | Permitted And Licensed           |
| Uranium One Americas, Inc.                 | Jab and Antelope                                      | Sweetwater, Wyoming                            | 2,000,000   | Developing                          | Developing                       | Developing                       | Developing                       | Developing                       |
| Uranium One Americas, Inc.                 | Moore Ranch   | Campbell, Wyoming                              | 500,000   | Partially Permitted And Licensed    | Permitted And Licensed           | Permitted And Licensed           | Permitted And Licensed           | Permitted And Licensed           |
| Uranium One USA, Inc.                      | Willow Creek Project (Christensen Ranch and Irigaray) | Campbell and Johnson, Wyoming                  | 1,300,000   | Standby                             | Operational                      | Producing                        | Producing                        | Producing                        |
| <b>Total Production Capacity:</b>          |   |  | <b>29,600,000</b>   |                                     |                                  |                                  |                                  |                                  |

- = No data reported.

Notes: Production capacity for 2013. An operating status of "Operating" indicates the in-situ-leach plant usually was producing uranium concentrate at the end of the period. Hobson ISR Plant processed uranium concentrate that came from La Palangana. Hobson and La Palangana are part of the same project. ISR stands for in-situ recovery. Christensen Ranch and Irigaray are part of the Willow Creek Project.

Source: U.S. Energy Information Administration: Form EIA-851A, "Domestic Uranium Production Report" (2009-13).

**Table 6. Employment in the U.S. uranium production industry by category, 2003-13**

person-years

| Year | Exploration | Mining | Milling | Processing | Reclamation | Total        |
|------|-------------|--------|---------|------------|-------------|--------------|
| 2003 | W           | W      | W       | W          | 117         | <b>321</b>   |
| 2004 | 18          | 108    | W       | W          | 121         | <b>420</b>   |
| 2005 | 79          | 149    | 142     | 154        | 124         | <b>648</b>   |
| 2006 | 188         | 121    | W       | W          | 155         | <b>755</b>   |
| 2007 | 375         | 378    | 107     | 216        | 155         | <b>1,231</b> |
| 2008 | 457         | 558    | W       | W          | 154         | <b>1,563</b> |
| 2009 | 175         | 441    | W       | W          | 162         | <b>1,096</b> |
| 2010 | 211         | 400    | W       | W          | 125         | <b>1,073</b> |
| 2011 | 208         | 462    | W       | W          | 102         | <b>1,191</b> |
| 2012 | 161         | 462    | W       | W          | 179         | <b>1,196</b> |
| 2013 | 149         | 392    | W       | W          | 199         | <b>1,156</b> |

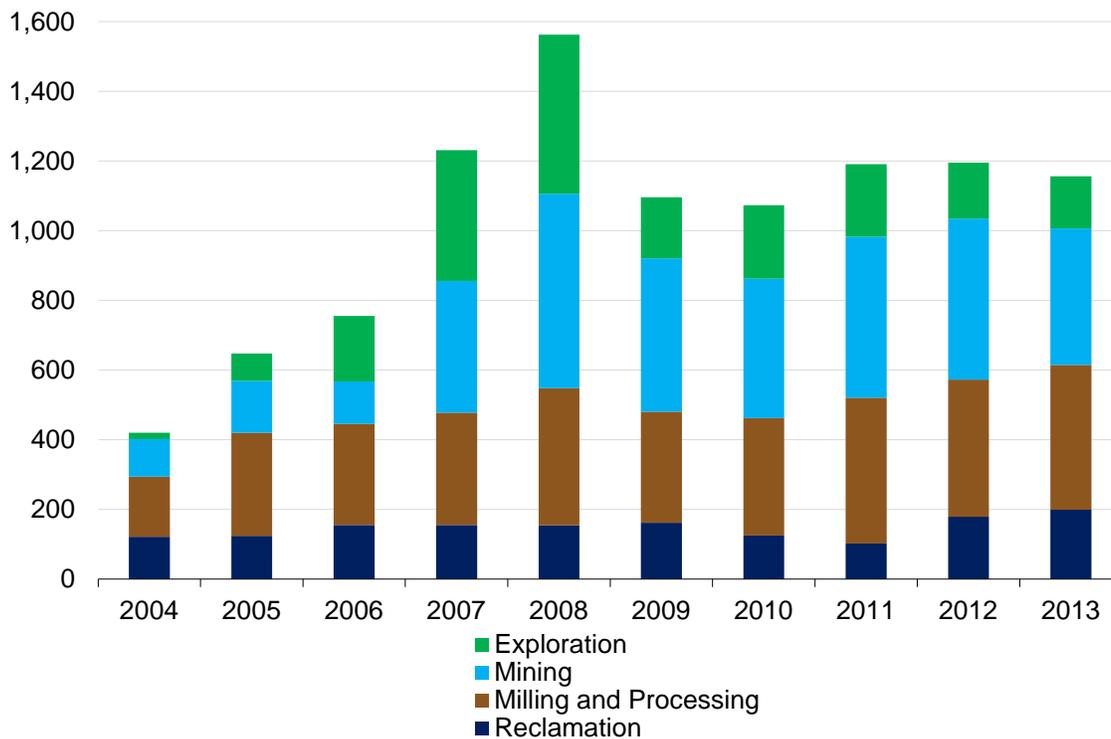
W = Data withheld to avoid disclosure of individual company data.

Note: Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration: Form EIA-851A, "Domestic Uranium Production Report" (2003-2013).

**Figure 3. Employment in the U.S. uranium production industry by category, 2004-13**

person-years



Source: U.S. Energy Information Administration: Form EIA-851A, "Domestic Uranium Production Report" (2004-2013).

**Table 7. Employment in the U.S. uranium production industry by state, 2003-13**

person-years

| State(s)  | 2003       | 2004       | 2005       | 2006       | 2007         | 2008         | 2009         | 2010         | 2011         | 2012         | 2013         |
|---|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Wyoming   | 134        | 139        | 181        | 195        | 245          | 301          | 308          | 348          | 424          | 512          | 531          |
| Colorado and Texas  | 48         | 140        | 269        | 263        | 557          | 696          | 340          | 292          | 331          | 248          | 198          |
| Nebraska and New Mexico   | 92         | 102        | 123        | 160        | 149          | 160          | 159          | 134          | 127          | W            | W            |
| Arizona, Utah, and Washington                                     | 47         | 40         | 75         | 120        | 245          | 360          | 273          | 281          | W            | W            | W            |
| Alaska, Michigan, Nevada, and South Dakota                        | 0          | 0          | 0          | 16         | 25           | 30           | W            | W            | W            | W            | W            |
| California, Montana, North Dakota, Oklahoma, Oregon, and Virginia | 0          | 0          | 0          | 0          | 9            | 17           | W            | W            | W            | W            | W            |
| <b>Total</b>  | <b>321</b> | <b>420</b> | <b>648</b> | <b>755</b> | <b>1,231</b> | <b>1,563</b> | <b>1,096</b> | <b>1,073</b> | <b>1,191</b> | <b>1,196</b> | <b>1,156</b> |

W = Data withheld to avoid disclosure of individual company data.

Note: Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration: Form EIA-851A, "Domestic Uranium Production Report" (2003-2013).

**Table 8. U.S. uranium expenditures, 2003-13**

million dollars

| Year | Drilling <sup>1</sup> | Production <sup>2</sup> | Land and Other <sup>3</sup> |      |             |             | Total Expenditures |
|------|-----------------------|-------------------------|-----------------------------|------|-------------|-------------|--------------------|
|      |                       |                         | Total Land and Other        | Land | Exploration | Reclamation |                    |
| 2003 | W                     | W                       | 31.3                        | NA   | NA          | NA          | <b>W</b>           |
| 2004 | 10.6                  | 27.8                    | 48.4                        | NA   | NA          | NA          | <b>86.9</b>        |
| 2005 | 18.1                  | 58.2                    | 59.7                        | NA   | NA          | NA          | <b>136.0</b>       |
| 2006 | 40.1                  | 65.9                    | 115.2                       | 41.0 | 23.3        | 50.9        | <b>221.2</b>       |
| 2007 | 67.5                  | 90.4                    | 178.2                       | 77.7 | 50.3        | 50.2        | <b>336.2</b>       |
| 2008 | 81.9                  | 221.2                   | 164.4                       | 65.2 | 50.2        | 49.1        | <b>467.6</b>       |
| 2009 | 35.4                  | 141.0                   | 104.0                       | 17.3 | 24.2        | 62.4        | <b>280.5</b>       |
| 2010 | 44.6                  | 133.3                   | 99.5                        | 20.2 | 34.5        | 44.7        | <b>277.3</b>       |
| 2011 | 53.6                  | 168.8                   | 96.8                        | 19.6 | 43.5        | 33.7        | <b>319.2</b>       |
| 2012 | 66.6                  | 186.9                   | 99.4                        | 16.8 | 33.3        | 49.3        | <b>352.9</b>       |
| 2013 | 49.9                  | 168.2                   | 90.6                        | 14.6 | 21.6        | 54.4        | <b>308.7</b>       |

NA = Not available. W = Data withheld to avoid disclosure of individual company data.

<sup>1</sup> Drilling: All expenditures directly associated with exploration and development drilling.

<sup>2</sup> Production: All expenditures for mining, milling, processing of uranium, and facility expense.

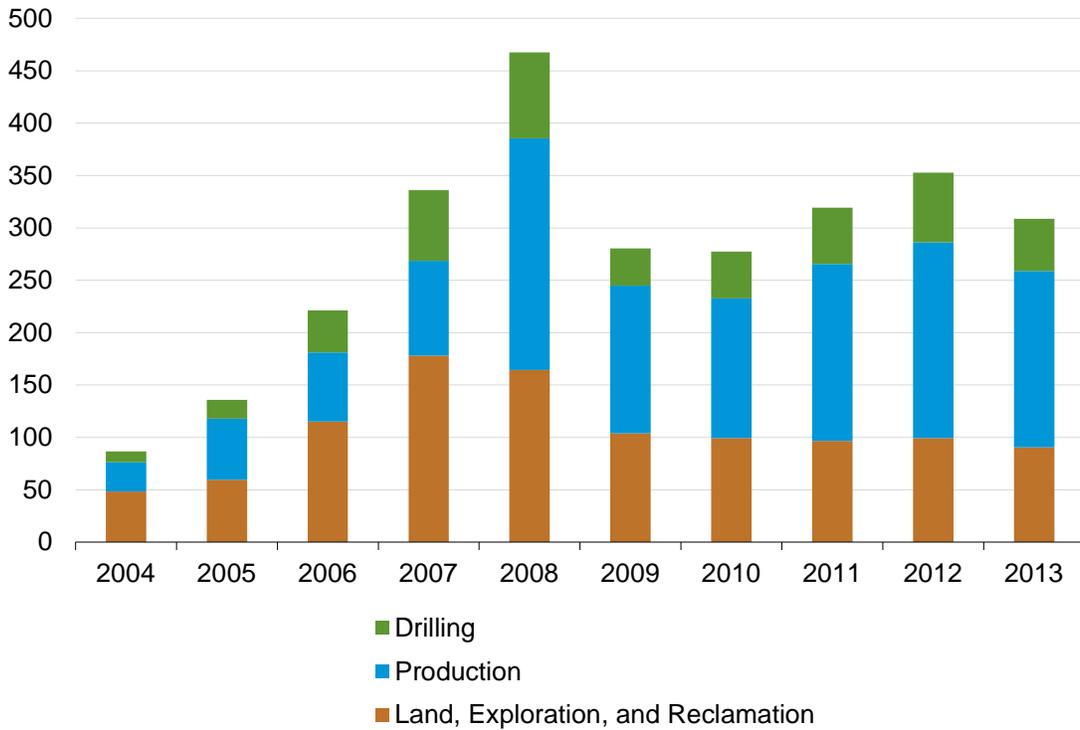
<sup>3</sup> Land and Other: All expenditures for land; geological research; geochemical and geophysical surveys; costs incurred by field personnel in the course of exploration, reclamation and restoration work; and overhead and administrative charges directly associated with supervising and supporting field activities.

Notes: Expenditures are in nominal U.S. dollars. Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration: Form EIA-851A, "Domestic Uranium Production Report" (2003-2013).

**Figure 4. U.S. uranium expenditures, 2004-13**

million dollars



Source: U.S. Energy Information Administration: Form EIA-851A, "Domestic Uranium Production Report" (2004-2013).

**Table 9. Summary production statistics of the U.S. uranium industry, 1993-2013**

| Year  | Exploration and  | Exploration and           | Mine Production of                              | Uranium Concentrate                             | Uranium Concentrate                             | Employment     |
|-------|------------------|---------------------------|---|---|---|----------------|
|       | Development      | Development               |   |   |   |                |
|       | Surface Drilling | Drilling                  | Uranium   | Production                                      | Shipments                                       |                |
|       | (million feet)   | Expenditures <sup>1</sup> | (million pounds U <sub>3</sub> O <sub>8</sub> ) | (million pounds U <sub>3</sub> O <sub>8</sub> ) | (million pounds U <sub>3</sub> O <sub>8</sub> ) | (person-years) |
|       |                  | (million dollars)         |   |   |   |                |
| 1993  | 1.1              | 5.7                       | 2.1   | 3.1   | 3.4   | 871            |
| 1994  | 0.7              | 1.1                       | 2.5   | 3.4   | 6.3   | 980            |
| 1995  | 1.3              | 2.6                       | 3.5   | 6.0   | 5.5   | 1,107          |
| 1996  | 3.0              | 7.2                       | 4.7   | 6.3   | 6.0   | 1,118          |
| 1997  | 4.9              | 20.0                      | 4.7   | 5.6   | 5.8   | 1,097          |
| 1998  | 4.6              | 18.1                      | 4.8   | 4.7   | 4.9   | 1,120          |
| 1999  | 2.5              | 7.9                       | 4.5   | 4.6   | 5.5   | 848            |
| 2000  | 1.0              | 5.6                       | 3.1   | 4.0   | 3.2   | 627            |
| 2001  | 0.7              | 2.7                       | 2.6   | 2.6   | 2.2   | 423            |
| 2002  | W                | W                         | 2.4   | 2.3   | 3.8   | 426            |
| E2003 | W                | W                         | 2.2   | 2.0   | 1.6   | 321            |
| 2004  | 1.2              | 10.6                      | 2.5   | 2.3   | 2.3   | 420            |
| 2005  | 1.7              | 18.1                      | 3.0   | 2.7   | 2.7   | 648            |
| 2006  | 2.7              | 40.1                      | 4.7   | 4.1   | 3.8   | 755            |
| 2007  | 5.1              | 67.5                      | 4.5   | 4.5   | 4.0   | 1,231          |
| 2008  | 5.1              | 81.9                      | 3.9   | 3.9   | 4.1   | 1,563          |
| 2009  | 3.7              | 35.4                      | 4.1   | 3.7   | 3.6   | 1,096          |
| 2010  | 4.9              | 44.6                      | 4.2   | 4.2   | 5.1   | 1,073          |
| 2011  | 6.3              | 53.6                      | 4.1   | 4.0   | 4.0   | 1,191          |
| 2012  | 7.2              | 66.6                      | 4.3   | 4.1   | 3.9   | 1,196          |
| 2013  | 3.8              | 49.9                      | 4.6   | 4.7   | 4.7   | 1,156          |

E = Estimated data, except for employment. W = Data withheld to avoid disclosure of individual company data.

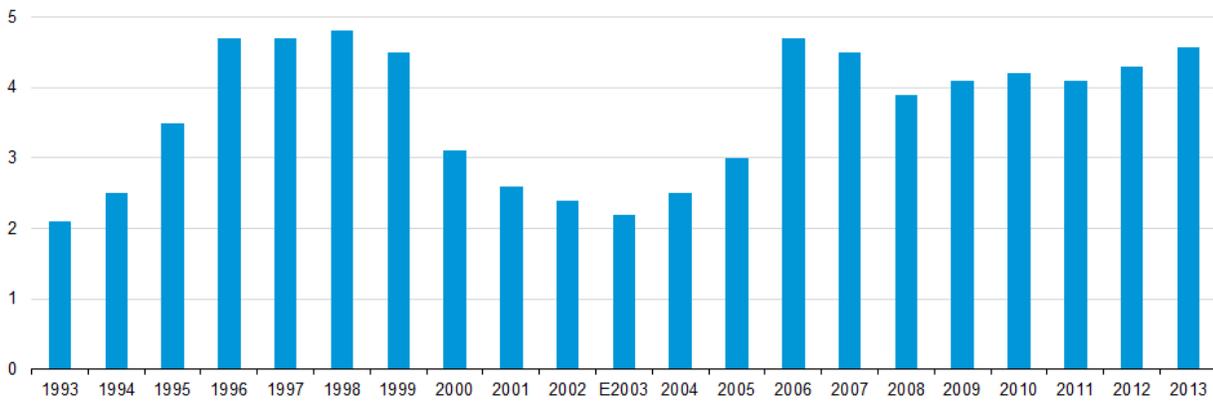
<sup>1</sup> Expenditures are in nominal U.S. dollars.

Note: The 2003 annual production and shipment amounts were estimated by rounding to the nearest 200,000 pounds to avoid disclosure of individual company data.

Source: U.S. Energy Information Administration: 1993-2002-Uranium Industry Annual 2002 (May 2003), Table H1 and Table 2. 2003-2013-Form EIA-851A, "Domestic Uranium Production Report" (2003-2013).

**Figure 5. U.S. mine production of uranium, 1993-2013**

million pounds U<sub>3</sub>O<sub>8</sub>



E = Estimated data.

Sources: U.S. Energy Information Administration: 1993-2002-Uranium Industry Annual 2002 (May 2003), Table H1 and Table 2. 2003-2013-Form EIA-851A, "Domestic Uranium Production Report" (2003-2013).

**Figure 6. U.S. uranium concentrate production and shipments, 1993-2013**

million pounds U<sub>3</sub>O<sub>8</sub>

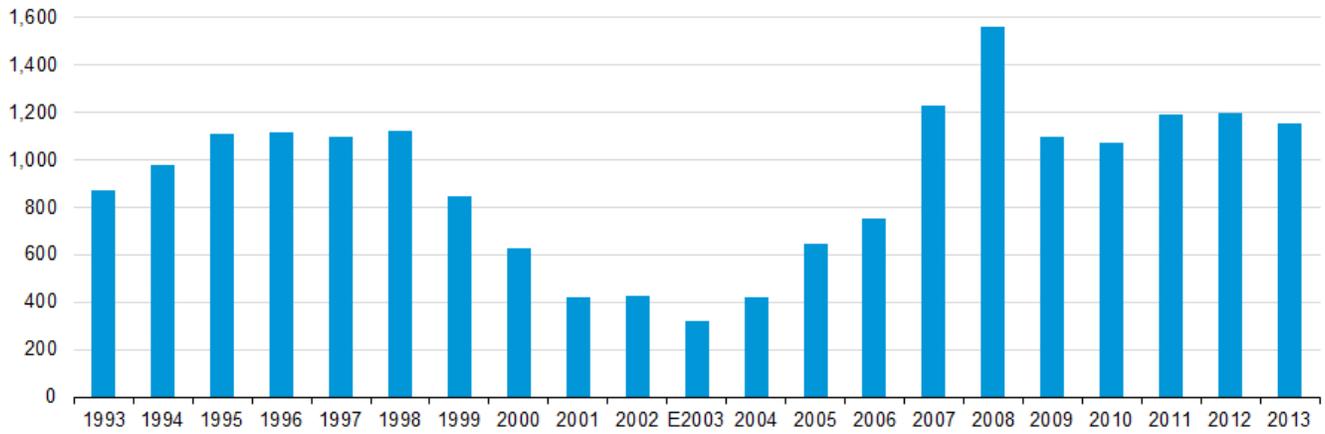


E = Estimated data.

Sources: U.S. Energy Information Administration: 1993-2002-Uranium Industry Annual 2002 (May 2003), Table H1 and Table 2. 2003-2013-Form EIA-851A, "Domestic Uranium Production Report" (2003-2013).

**Figure 7. Employment in the U.S. production industry, 1993-2013**

person-years



Sources: U.S. Energy Information Administration: 1993-2002-Uranium Industry Annual 2002 (May 2003), Table H1 and Table 2. 2003-2013-Form EIA-851A, "Domestic Uranium Production Report" (2003-2013).

**Table 10. Uranium reserve estimates at the end of 2012 and 2013**

million pounds U<sub>3</sub>O<sub>8</sub>

| Uranium Reserve Estimates <sup>1</sup> by Mine and Property Status, Mining Method, and State(s) | End of 2012           |                       |                        | End of 2013               |                       |                        |
|---|-----------------------|-----------------------|------------------------|---------------------------|-----------------------|------------------------|
|   |                       |                       |                        | Forward Cost <sup>2</sup> |                       |                        |
|   | \$0 to \$30 per pound | \$0 to \$50 per pound | \$0 to \$100 per pound | \$0 to \$30 per pound     | \$0 to \$50 per pound | \$0 to \$100 per pound |
| Properties with Exploration Completed, Exploration Continuing, and Only Assessment Work         | W                     | W                     | 102.0                  | W                         | W                     | 130.7                  |
| Properties Under Development for Production and Development Drilling                            | W                     | W                     | W                      | W                         | 31.8                  | W                      |
| Mines in Production   | W                     | 21.4                  | W                      | W                         | 19.6                  | W                      |
| Mines Closed Temporarily, Closed Permanently, and Mined Out                                     | W                     | W                     | 133.1                  | W                         | W                     | 135.2                  |
| In-Situ Leach Mining  | W                     | W                     | 128.6                  | W                         | W                     | 124.1                  |
| Underground and Open Pit Mining   | W                     | W                     | 175.4                  | W                         | W                     | 213.5                  |
| Arizona, New Mexico and Utah  | 0                     | W                     | 164.7                  | 0                         | W                     | 189.1                  |
| Colorado, Nebraska and Texas  | W                     | W                     | 40.8                   | W                         | W                     | 40.6                   |
| Wyoming   | W                     | W                     | 98.5                   | W                         | W                     | 107.9                  |
| <b>Total</b>  | <b>51.8</b>           | <b>W</b>              | <b>304.0</b>           | <b>46.6</b>               | <b>W</b>              | <b>337.6</b>           |

W = Data withheld to avoid disclosure of individual company data.

<sup>1</sup> Reserve estimates on 71 mines and properties for end of 2012 and on 74 mines and properties for end of 2013. These uranium reserve estimates cannot be compared with the much larger historical data set of uranium reserves that were published in the July 2010 report U.S. Uranium Reserves Estimates at <http://www.eia.gov/cneaf/nuclear/page/reserves/ures.html>. Reserves, as reported here, do not necessarily imply compliance with U.S. or Canadian government definitions for purposes of investment disclosure.

<sup>2</sup> Forward Cost: The operating and capital costs still to be incurred in the production of uranium from in-place reserves. By using forward costing, estimates for reserves for ore deposits in differing geological settings and status of development can be aggregated and reported for selected cost categories. Included are costs for labor, materials, power and fuel, royalties, payroll taxes, insurance, and applicable general and administrative costs. Excluded from forward cost estimates are prior expenditures, if any, incurred for property acquisition, exploration, mine development, and mill construction, as well as income taxes, profit, and the cost of money. Forward costs are neither the full costs of production nor the market price at which the uranium, when produced, might be sold.

Note: Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration: Form EIA-851A, "Domestic Uranium Production Report" (2012-2013).